Caltrans

Construction Storm Water Pollution Prevention Bulletin

Volume 1/Issue No. 16 December 15, 1997

The Storm Water Pollution Prevention Bulletin is prepared by the Storm Water Compliance Review Task Force to aid all projects and operations in maintaining compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements.

Construction Scheduling CD 22 and the use of Existing Vegetation for Job Site Erosion Control CD 23

Storm water pollution prevention can be simplified by utilizing existing vegetation and construction scheduling. This bulletin presents a guide to using these practices to aid in achieving storm water pollution prevention goals.

Step 1 Evaluate The Site

Before preparing your SWPPP or WPCP, review the plans to evaluate the entire site and identify the following:

- Areas where sediment-laden runoff could leave the construction site.
- Areas of vegetation, trees and shrubs that can be saved throughout the construction process.
- Areas to be protected and used as vegetation filter strips - especially in the perimeter areas.
- Designated trees and their associated rooting zones.
- Unique areas and environmentally-sensitive areas required to be preserved.
- Areas that could be hydro-seeded to serve as vegetation filter strips.

Example of vegetation filter strip below erodible slope. (Note straw mulch soil stabilization)

Step 2 Develop a Construction Schedule Friendly to Erosion Prevention - CD 22

Identify sequencing and timetable for the start and completion of soil-disturbing activities such as site clearing, grubbing, grading and excavation work. Schedule around the wet season, if possible.

Develop cost-benefit guides using past projects and anticipated regulation requirements to determine if scheduling additional move-in costs to clear and grub in stages will offset soil stabilization and sediment control costs for areas that will be left disturbed for extended periods.

Downslope existing vegetation protected with plastic mesh fence during summer. Note silt fence barrier (to prevent sluffing) in need of maintenance.

Your erosion control planning in the winter season should include provisions for complete clean up and replacement of BMPs should a major storm occur.

Be sure to incorporate soil stabilization for soil-disturbed areas in your schedule and try to minimize land-disturbing activities during the wet season.

Plan to implement permanent controls as soon as possible by incorporating costs for staged seeding and re-vegetation of newly graded slopes.

Select a reputable hydro-seeding subcontractor, delays in seeding can be costly.

Finalize your schedule and state your assumptions for future use on similar projects. Refer to CD 22 for additional information.

Step 3 Incorporate Existing Features to Enhance Perimeter Soil Stabilization and Sediment Controls - CD 23.

On slopes of less than 6 percent, preserve a 20- to 30-foot-wide vegetative buffer strip around the perimeter of the property, and use it as a filter strip for trapping sediment.

Do not mow filter strip vegetation shorter than 4 inches, if at all.

Protect trees and sensitive areas by placing plastic mesh fence barriers around the tree dripline to protect the area below the branches.

To prevent root damage, do not grade, burn, place soil piles, store hazardous materials, store general construction materials or park vehicles near trees or in areas marked for preservation.

Do not clear and grub areas unless it is part of work specified in the contract documents.

Store only materials essential for work progress on-site. Long term storage uses excess space and creates a potential for both storm water and non-storm water generated pollution.

Use of existing vegetation to achieve storm water pollution prevention compliance is a widespread practice on the east coast and in the midwest but has yet to be embraced fully here in California. Depending on the project conditions, protecting the existing vegetation can be a cost-effective best management practice.

Additional information is available in the Caltrans Storm Water Quality Handbooks. Questions or comments may be directed to:

Ken Keaton
Caltrans HQ Environmental Engineering
(916) 653-4947
or
Melinda McCoy
Consultant Team
(714) 567-2588

Holmes & Narver
VALI COOPER & ASSOCIATES, INC
AGI-CASC